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NAVAER [REDACTED] ISSUE OF 6 PAGES

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS-NAVY DEPT.

COLUMN NUMBER	1	2	3	4
LOADING CONDITION	PATROL	A.S. PATROL 4-325#	A.S. PATROL 4-325#	BOMBER 4-500#
GROSS WEIGHT LBS.	33975	32415	35420	34000
EMPTY WEIGHT (Actual) LBS.	20910			
FUEL/OIL GALS.	1463/92	1000/62	1463/92	1135/72
FLEX.GUNS/AMMUNITION	Bow: 2-.30/2100, Tunnel: 1-.30/500			
FLEXIBLE GUNS/AMMUNITION	Waist: 2-.50/840			
ENGINE POWER USED FOR PERFORMANCE	NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING LBS./SQ.FT.	24.3	23.1	25.4	24.2
POWER LOADING ① LBS/BHP.	16.1	15.4	16.9	16.2
V-MAX. SEA LEVEL MPH.	169	167	165	166
V-MAX. AIRPLANE CRIT.ALT. MPH.	179/7000	177/7000	175/7000	176/7000
V-STALL. GROSS WEIGHT. ② MPH.	77.7	76.0	79.4	77.7
V-STALL. WITHOUT FUEL ② MPH.	66.9	68.6	68.9	69.5
TIME-TO-CLIMB -10000FT.- MIN.	19.3	16.9	22.7	19.7
TIME-TO-CLIMB -20000FT.- MIN.				
SERVICE CEILING FT.	14700	16200	13000	14500
TAKE-OFF DISTANCE -CALM- FT.	1185	1045	1360	1193
TAKE-OFF DISTANCE -15 KN- FT.	721	630	843	725
TAKE-OFF DISTANCE -25 KN- FT.	482	417	566	485
TAKE-OFF TIME SECONDS	50	42	66	50
MAX.RANGE/V-AV. ③ ST.MI/MPH.	2545/117	1660/111	2350/113	1820/112
BOMBING RADIUS/V-AV.-20%R- NMI/KN.				610/98
BOMBING RADIUS/V-AV.-33%R- NMI/KN.				515/98
PATROL RADIUS/V-AV.-20%R- NMI/KN.	575/103	380/97	535/99	
PATROL RADIUS/V-AV.-33%R- NMI/KN.	475/103	310/97	435/99	
SCOUT. RADIUS NMI.				
COMBAT RADIUS NMI.				
ENGINE /PROP.GEAR RATIO	2 P. & W. R 1830-92 (16:9)			
ENGINE RATING BHP/RPM/ALT.	NORMAL 1050/2550/S.L.-7000		MILITARY None	
	1200/2700/Take-off			
NOTE	STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS. ① BHP AT MAX.CRIT.ALT. ② STALL-WITH POWER ③ AT 1500' ALTITUDE			

	TANKAGE IN GALLONS	OIL	FUEL	OFFENSIVE ARMAMENT
FIXED	PROTECTED-(1 Tank-5 cells)	130	603	WINGS (External)
	UNPROTECTED (1 Tank) *		875	Bombs : 4-1000#, 4-500#
	TOTAL-INCL.PROT.	130	1478	12-100#
	INCREASE-REMOVED PROTECTION		272	Torpedoes : 2 MK 13-2, or -1
AUX.				Depth Bombs : 4-650# or 4-325#
	DROPPABLE	None		
	DROPPABLE			
	PROTECTED+UNPROTECTED+DROPPABLE	130	1478	

REMARKS- * Installation of 5 additional cells reduces this capacity to 603 gals. and total capacity to 1206 gals.

Removal of de-icer boots (102#) increases Vmax 2 st. mph and increases max. range 2%.

SUPERSEDES 8/13/42

NAVAER

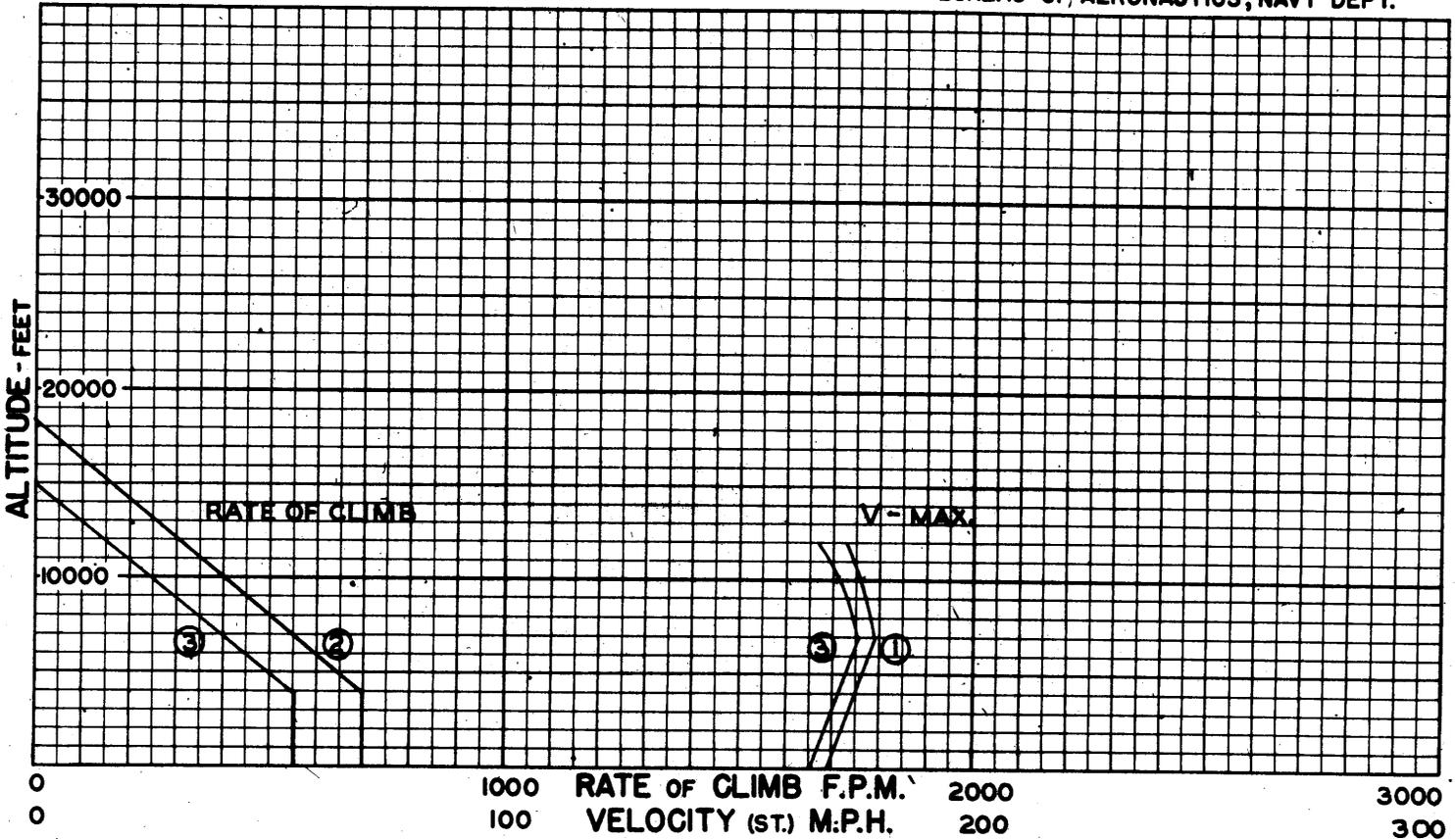
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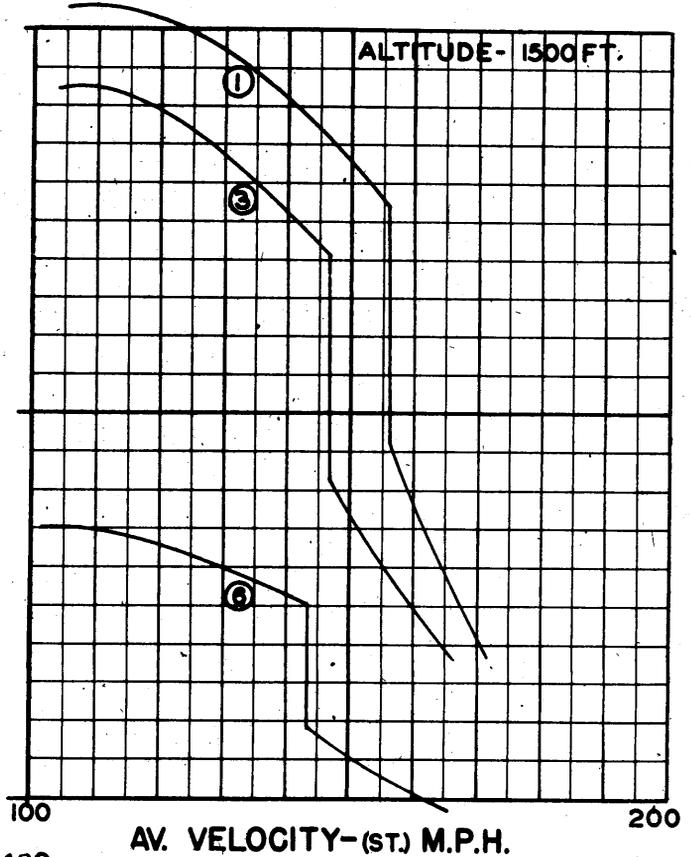
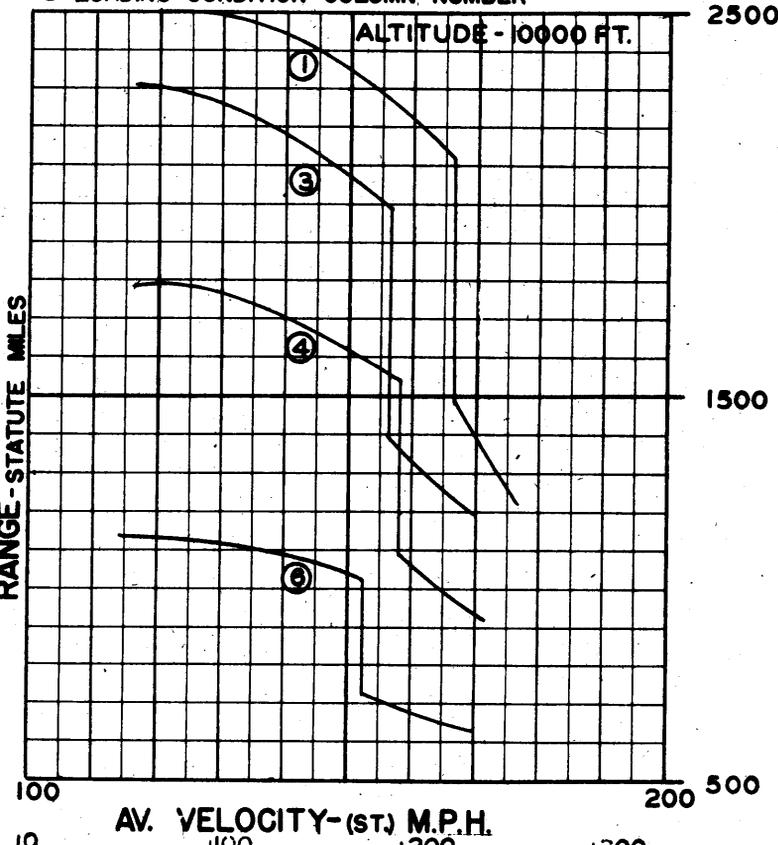
COLUMN NUMBER	5	6	7	8
LOADING CONDITION	BOMBER 4-1000#	TORPEDO 2 MK 13-2	TORPEDO 2 MK 13-2	FERRY
GROSS WEIGHT LBS.	34000	34000	35300	32300
EMPTY WEIGHT (Actual) LBS.		20910		20230
FUEL/OIL GAL.	825/53	785/50	1000/62	1463/92
FLEX.GUNS/AMMUNITION	3-.30/2600			None
FLEXIBLE GUNS/AMMUNITION	2-.50/840			None
ENGINE POWER USED FOR PERFORMANCE	NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING LBS/SQ.FT.	24.2	24.2	25.4	23.1
POWER LOADING ① LBS/BHP.	16.2	16.2	16.8	15.4
V-MAX. SEA LEVEL MPH.	165	164	163	183
V-MAX. AIRPLANE CRIT.ALT. MPH.	175/7000	174/7000	173/7000	194/7000
V-STALL. GROSS WEIGHT. ② MPH.	77.7	77.7	79.2	75.8
V-STALL. WITHOUT FUEL ② MPH.	72.0	72.2	72.2	64.6
TIME-TO-CLIMB -10000FT.- MIN.	19.7	19.7	22.7	15.5
TIME-TO-CLIMB -20000FT.- MIN.				
SERVICE CEILING FT.	14500	14400	13000	17200
TAKE-OFF DISTANCE -CALM- FT.	1195	1200	1345	990
TAKE-OFF DISTANCE -15 KN- FT.	726	728	832	598
TAKE-OFF DISTANCE -25 KN- FT.	486	487	560	390
TAKE-OFF TIME SECONDS.	50	52	65	41
MAX. RANGE /V-AV. ③ ST.MI/MPH.	1265/111	1200/110	1500/110	2800/122
BOMBING RADIUS /V-AV.-20% R- NMI/KN.	440/97	415/96	510/96	
BOMBING RADIUS /V-AV.-33% R- NMI/KN.	360/97	345/96	425/96	
PATROL RADIUS /V-AV.-20% R- NMI/KN.				
PATROL RADIUS /V-AV.-33% R- NMI/KN.				
SCOUT. RADIUS NMI.				
COMBAT RADIUS NMI.				

PERFORMANCE IS BASED ON- **FLIGHT TEST**
 RANGE & RADIUS ARE BASED ON **FLIGHT TEST** FUEL CONSUMPTION DATA INCREASED BY 5 PERCENT TO CONFORM WITH PAST EXPERIENCE.
Practical Patrol Radius is 1/3 of range at V for max. range at 1500' with fuel taken out for reserve.
Practical Bombing Radius is 1/2 of range at V for max. range at 1500' with fuel taken out for reserve.
Reserve considered 20% for good flight conditions and 33% for adverse flight conditions.
 The following changes are incorporated: Contract - thru AJ; Service - thru #124; Pending - Installation of twin .30 cal. bow guns in lieu of single .30 cal.
 Installation of single .30/1000 bow gun in lieu of twin .30/2100 decreases G.W. approximately 150#.
 Max. range in the ferry condition with landing gear removed and 2 (170 gals. each) wheel well tanks installed (G.W. = 32,950; 1803 gals. fuel) is 3550 st. miles at 124 st. mph at 1500 ft.

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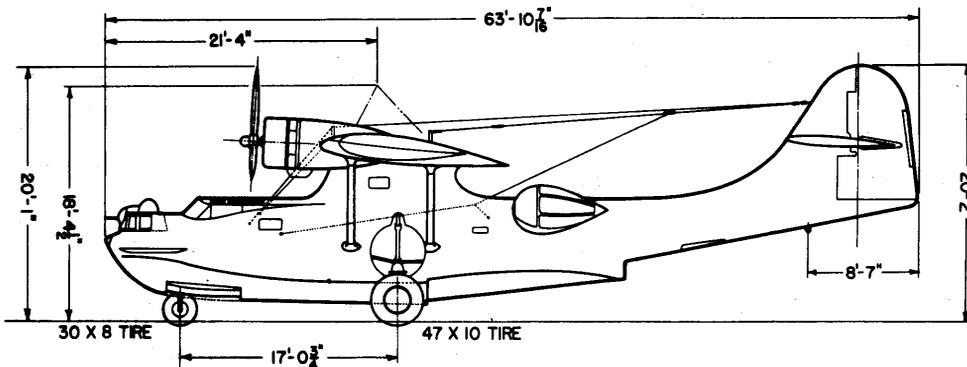
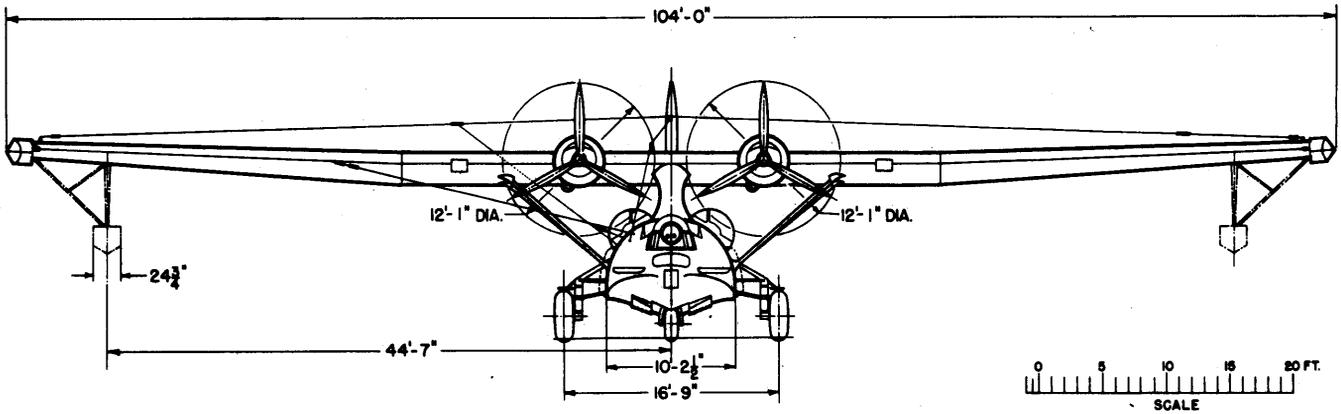
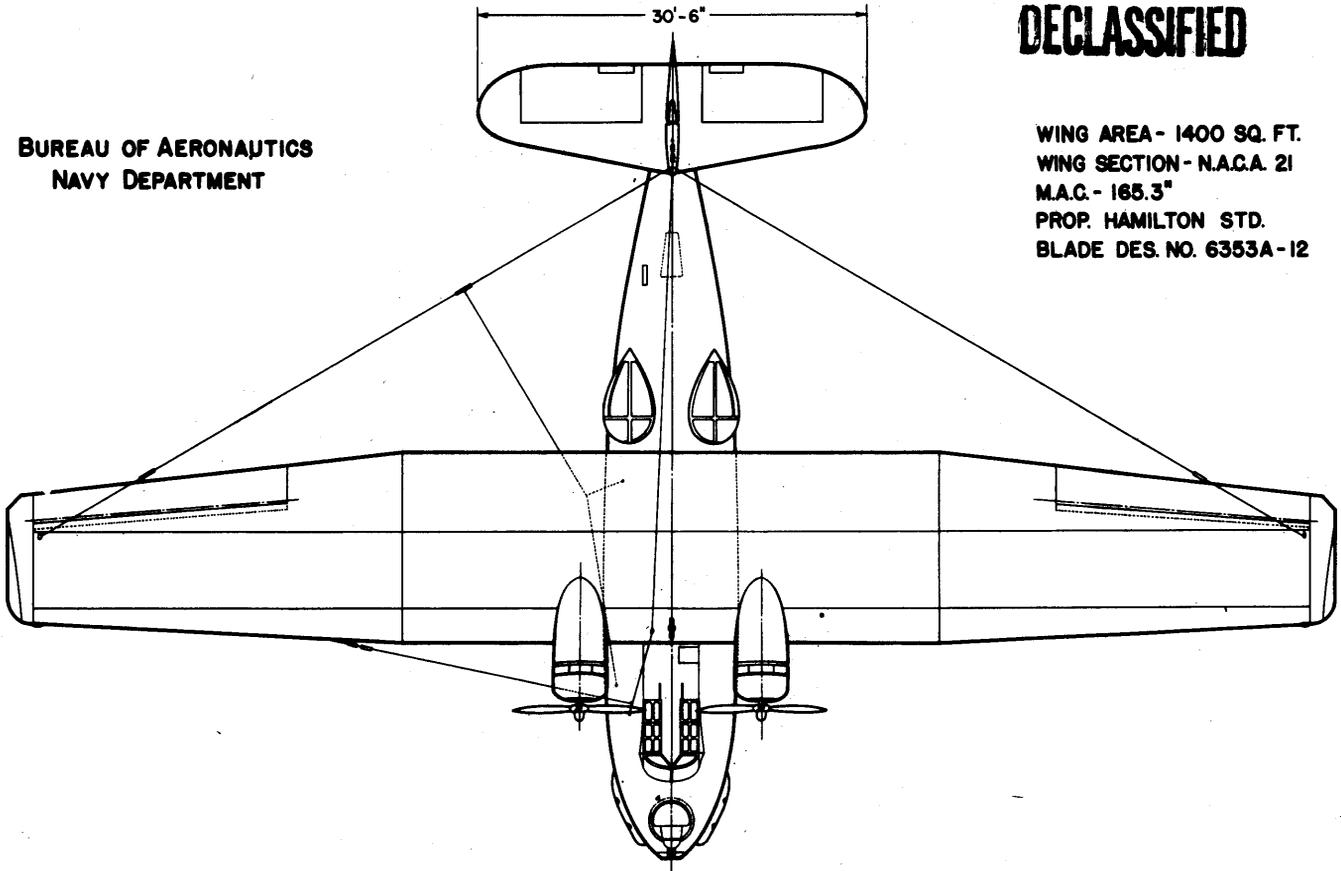
○ LOADING CONDITION COLUMN NUMBER



BUREAU OF AERONAUTICS
NAVY DEPARTMENT

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WING AREA - 1400 SQ. FT.
WING SECTION - N.A.C.A. 21
M.A.C. - 165.3"
PROP. HAMILTON STD.
BLADE DES. NO. 6353A-12

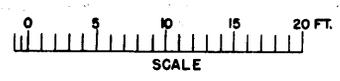
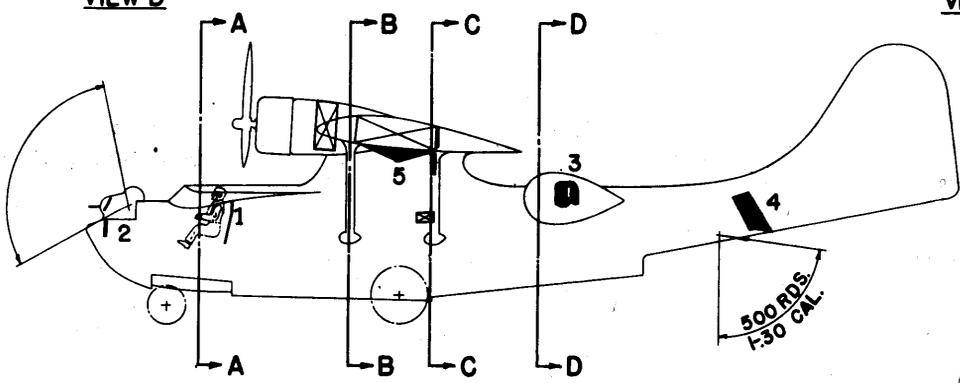
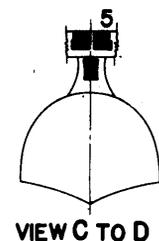
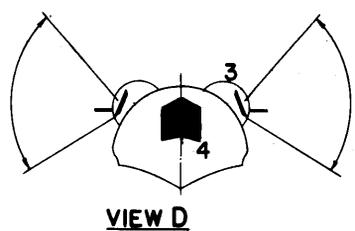
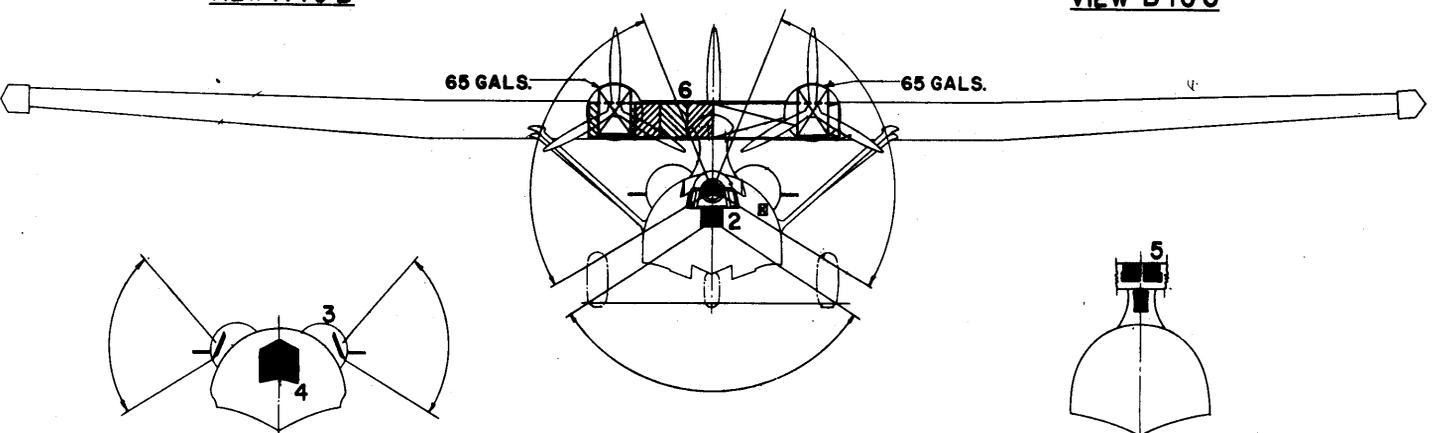
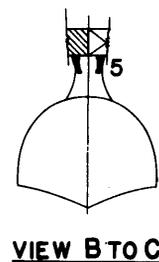
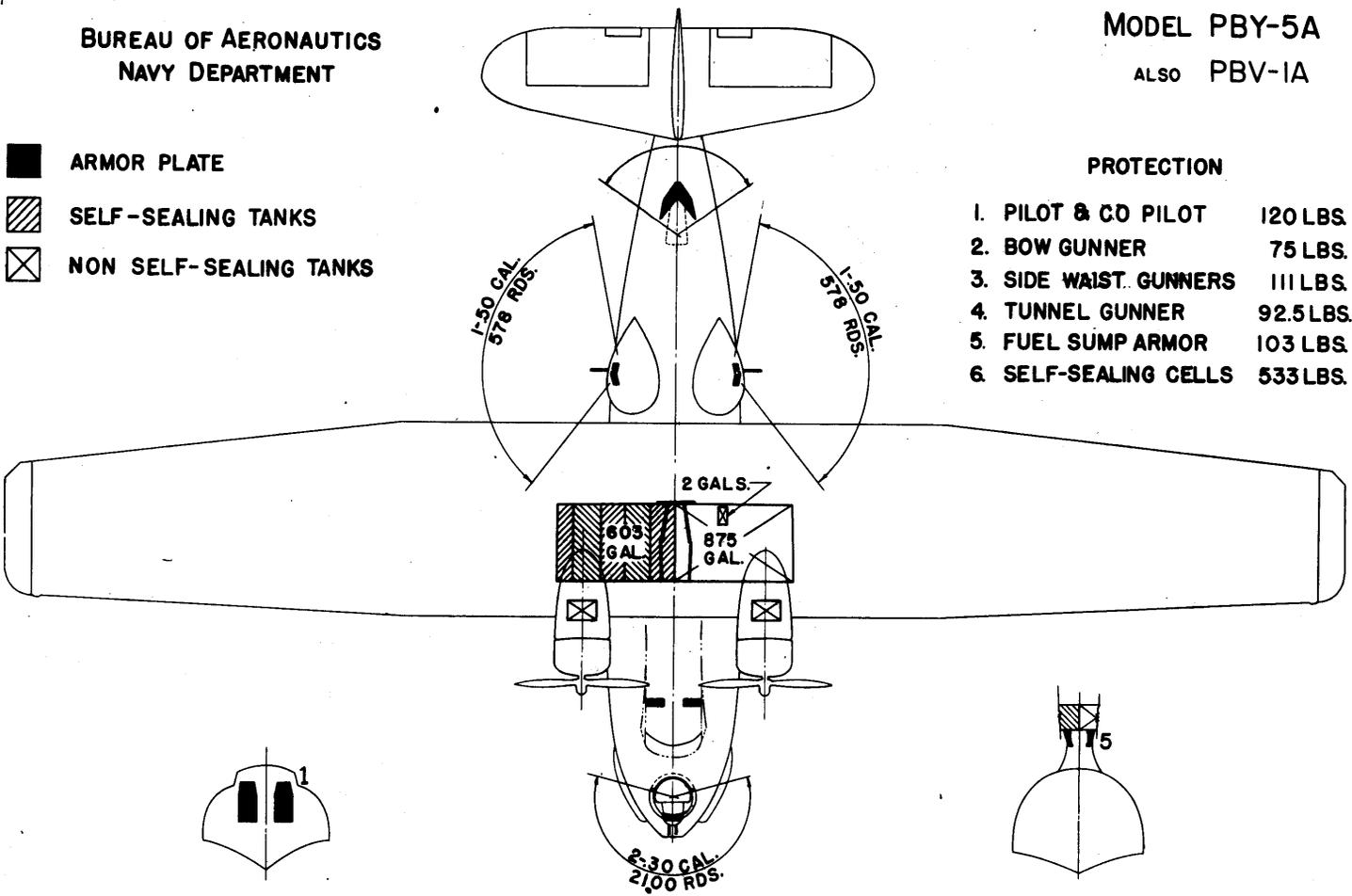


ALSO PBV-1A
MODEL PBY-5A

-  ARMOR PLATE
-  SELF-SEALING TANKS
-  NON SELF-SEALING TANKS

PROTECTION

- | | |
|-----------------------|-----------|
| 1. PILOT & CO PILOT | 120 LBS. |
| 2. BOW GUNNER | 75 LBS. |
| 3. SIDE WAIST GUNNERS | 111 LBS. |
| 4. TUNNEL GUNNER | 92.5 LBS. |
| 5. FUEL SUMP ARMOR | 103 LBS. |
| 6. SELF-SEALING CELLS | 533 LBS. |



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